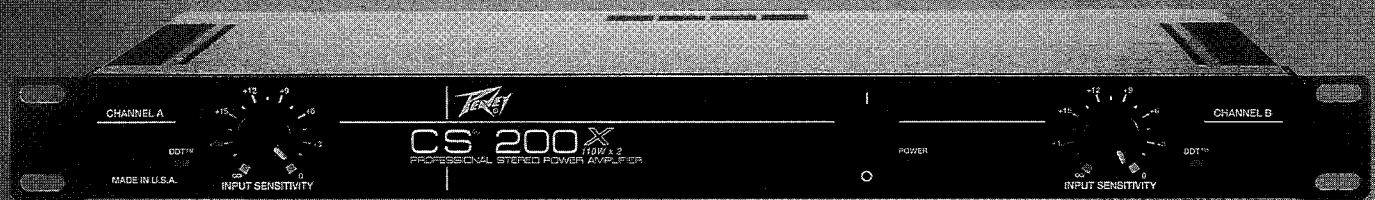


CS[®] 200X

PROFESSIONAL STEREO POWER AMPLIFIER

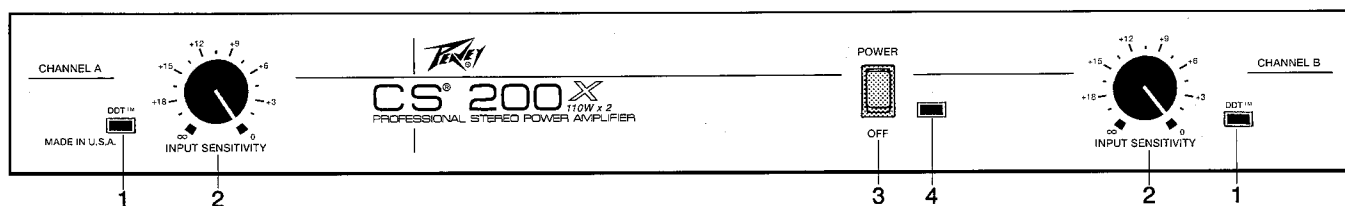
O P E R A T I N G G U I D E



The new CS[®]200X is a single rack space, solid state, stereo power amplifier capable of delivering more than 85 W RMS per channel into 4, 8 or 16 ohms at 1% THD. The unit has been designed to reliably drive mismatched lower impedance loads to impressive high power levels. The CS 200X can deliver 110 W RMS per channel into 2 ohms (4 ohm setting), 120 W RMS per channel into 4 ohms (8 ohm setting), and 120 W RMS per channel into 8 ohms (16 ohm setting). The unit employs a specially designed toroidal power transformer with three different voltage taps. A rear panel, 3-position selector switch gives this amp the impedance selection capability by changing the internal "rail" operating voltages. The CS 200X has a rear panel, stereo/bridge select switch and Peavey's patented DDT[™] compression system for the ultimate control of headroom and distortion. Together, these features allow the CS 200X to be a very flexible unit and offer a variety of power and impedance combinations for PA, guitar, and distribution applications. The following are extra capabilities not listed above:

1. Bridged 220 W RMS into 4 ohms...for PA or guitar
2. Bridged 240 W RMS into 8 ohms...for PA or guitar
3. Bridged 240 W RMS into 16 ohms...for PA or guitar
4. Dual 85 W RMS into 8 ohms (25 V RMS)...for distribution.
5. Bridged 170 W RMS into 32 ohms (70 V RMS)...for distribution.

The front panel of the CS 200X contains dual calibrated, detented input sensitivity controls, a mains power switch, an LED power indicator, and dual LED DDT activation indicators. The rear panel of the CS 200X has dual paralleled 1/4" input jacks, dual paralleled 1/4" output jacks, and 5-way binding posts for each channel. Additionally, the back panel has the stereo/bridge select, the impedance select, and the ground lift switches.



DDT[™] ACTIVE LEDS (1)

Illuminates when DDT compression is taking place in the channel. DDT compression is an extremely valuable feature to help keep each channel from clipping. (This feature will be discussed later.)

INPUT SENSITIVITY CONTROLS (2)

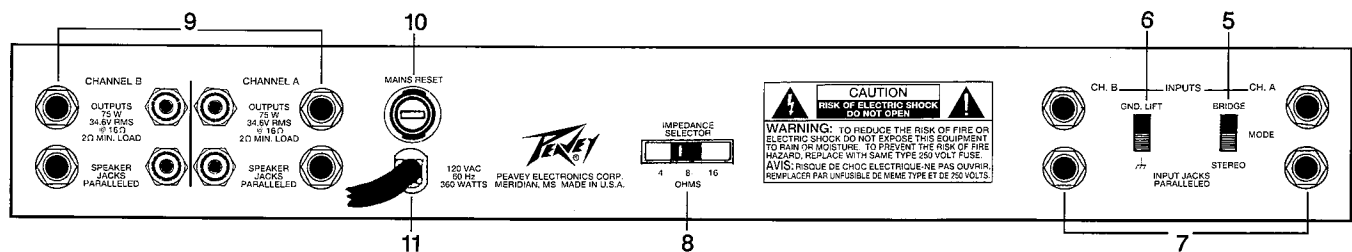
Controls used to adjust the input level of each channel and determine how "loud" each channel of the power amplifier will "play" for a given input signal level. Maximum input gain (minimum sensitivity rating) is achieved at the full clockwise setting, and this setting yields maximum mixer/system headroom. A setting of less than full clockwise will yield lower system noise at the expense of mixer/system headroom. The calibration indicates sensitivity in dBV necessary to attain the full available output power rating into 8 ohms.

MAINS POWER SWITCH (3)

A heavy duty rocker type switch used to select the "off" position turns the power amplifier off.

POWER LED (4)

Illuminates when AC mains power is supplied to the amplifier and the main power switch is turned on. If either channel were to experience fault conditions, which will cause the rear panel circuit breaker trip, the power LED will go out, indicating such conditions exist.



MODE SWITCH (5)

This switch is used to select either STEREO or BRIDGE mode of operation. Care should be exercised whenever the BRIDGE mode is selected. Accidental selection of this mode could damage loudspeakers, particularly in BIAMPED systems. (The BRIDGE mode will be covered in greater detail later in this manual.)

GROUND LIFT SWITCH (6)

This switch is used to disconnect the unit's signal ground (both input and output) from the "chassis ground." Chassis ground is the chassis, itself, which is electrically grounded through the rack mounting screws to the external rack system and through the mains line cord via the large ground pin to the mains ground. It is often advantageous to "lift" the signal ground from chassis ground to eliminate a "ground loop" which has caused unwanted ground current in the signal cables between the external preamp and this power amplifier. Such conditions can create excessive hum levels in the power amplifier output and render the system useless in low level applications. In this case "lifting" the ground should solve this hum problem. Ground lift is selected when the switch is in the upper position. If lifting the ground does not eliminate a particular hum problem, we recommend you defeat the ground lift feature. (Please note that using this ground lift feature still leaves the chassis itself grounded electrically through the mains line cord.) Having the chassis grounded avoids any possibility of an electrical shock or a fire hazard. This ground lift feature should never be confused with the practice of "floating" the large ground pin at the AC mains receptacle to eliminate the ground loop. Floating the ground pin on any electrical equipment is just asking for trouble!!!

HIGH Z INPUT JACKS (7)


Two parallel (bridged) input jacks are provided for each channel. This allows for one to be used as a conventional input and the other to be used simultaneously as a "line out" (Y-cord) to connect to another input jack on this amplifier or to other equipment. All these 1/4" jacks are stereo (RING, TIP, AND SLEEVE), and the input circuitry of the CS 200X is full differential, allowing a balanced input capability. As usual, the tip is the positive input, the ring is the negative input, and the sleeve is input ground. To use the balanced input feature, one must employ a two conductor shielded cable fitted with a stereo 1/4" plug. A conventional patch cord using single conductor shielded cable fitted with a regular tip/sleeve plug can be used, if desired, but then the input is NOT BALANCED! Fully balanced systems are the obvious choice of most professionals, but usually such systems will employ an XLR connector. In this case a suitable XLR to phone plug adaptor must be used. Also, if the Y-cord feature is used to patch to another input from the parallel input jack, the 1/4" cord used must be stereo for balanced or mono for unbalanced. If a 1/4" mono cord is used to parallel inputs from a balanced or 1/4" stereo input, the system will be rendered unbalanced.

IMPEDANCE SELECTOR SWITCH (8)

This switch is a 3-position type allowing the CS 200X to be converted to either a 4 ohm, 8 ohm, or 16 ohm amplifier. This selection switch is actually changing electrical "taps" on the specially designed toroidal power transformer and, thereby, selects three different internal "rail" voltages. This feature is not found on many power amplifiers, and it makes the CS 200X a very unique and flexible unit, permitting it to be used with virtually any impedance loudspeaker load. When a particular impedance is selected (for example, 8 ohms), the internal power


supply voltage and limiting circuits are set to drive optimally an 8 ohm load per channel (or a 16 ohm bridge load). (A more thorough impedance discussion will follow in the speaker outputs section.) When using this switch, two important facts must be considered: **FIRST, NEVER CHANGE SWITCH POSITIONS WITH THE POWER APPLIED TO THE CS 200X**; the instantaneous charging currents can cause the switch to arc and this could degrade the switch contacts to where they could fail. Second, since this selector switch is a slider type, one must be certain that it is "slid" into the proper position. This is particularly critical in the center position (8 ohms) where a slight offset from center could cause the switch contacts to not "make" properly. If the switch is positioned far from center, but not all the way to either side, it is possible to lose power completely on the amp or have only one of the two switch contacts "make." This can cause severe power transformer overheating and possible failure!

SPEAKER OUTPUTS (9)


 Two 1/4" jacks and 5-way binding post speaker output terminals are provided for each channel. All these outputs are in parallel, hence the speaker connection cables can be terminated with 1/4" phone plugs, banana plugs, or stripped wires for use in the binding post terminals. For sustained high power applications, the use of the binding post terminals are recommended. However, care must be exercised to assure the correct speaker phasing. Regardless of what connections are used, the typical parallel speaker load should always be limited to no less than half of the impedance selector switch setting per channel or 2 ohms per channel, whichever value is greater. This also should be limited to no less than the impedance selector switch setting or 4 ohms in BRIDGE mode, whichever value is greater. Operation at the load values of the Impedance Selector switch setting per channel, or twice that of the impedance selector setting in BRIDGE mode, is more desirable for sustained operation applications due to the fact that the unit will operate much cooler with these load values. Operation above these load impedances and open circuit conditions can always be considered safe. However, sustained operation at loads below the impedance selector switch setting per channel and below twice that of the impedance selector switch setting in BRIDGE mode could result in temporary amplifier shut down due to the thermal limits and/or the internal fault circuitry. (A chart listing the allowable loads for the various impedance selector values is included.)

CIRCUIT BREAKER (10)

This breaker is provided to limit the current to the associated power transformer and protect it from overheating and possible destruction due to fault conditions in the amplifier. The trip current values have been carefully chosen to allow continuous power output performance while still protecting the power transformer. Normally, these breakers should not trip unless there is a fault in the amplifier circuitry that draws excessive mains current. However, abnormal conditions such as a short circuit on either or both channels, or continuous operation at overload or clipping (especially into impedance below the impedance selector switch setting per channel and twice the impedance selector setting in bridge mode) will cause the breaker to trip. If this occurs, turn the power switch off, then simply reset the breaker and correct the cause of the overload.

 When tripped, the button on the breaker will be outward nearly 1/2" and can be reset by pushing inward. A normal reset button length is about 1/4". If this "thermal" type breaker does trip, simply pushing the button back in will reset it, after waiting a brief period of time to allow it to cool down. **REMEMBER, ALWAYS TURN THE POWER OFF BEFORE RESETTING THE BREAKER.** If the breaker trips instantly each time you attempt to reset it, the unit should be taken to a qualified service center for repair.

MAINS POWER SOURCE (120V products only) (11)

 The CS 200X is fitted with a heavy duty #18 AWG 3 conductor line cord and a conventional AC plug with a ground pin. It should be connected to an independent mains circuit capable of supporting at least 15 AMPS continuously or greater. This is particularly critical for sustained high power applications when two or more CS 200X's are employed on the same circuit. If the socket used does not have a ground pin, a suitable ground lift adaptor should be used and the third wire grounded properly. **Never break off**

the ground pin on the CS 200X. The use of extension cords should be avoided but, if necessary, always use a 3-wire type extension cord with at least a #16 AWG wire size. The use of lighter wire will severely limit the power capability of this amplifier. Always use a qualified electrician to install any necessary electrical equipment. To prevent the risk of shock or fire hazard, always be sure that the amplifier is properly grounded.

INSTALLATION AND CONNECTION:

The Peavey CS 200X commercial series power amplifier is designed for durability in commercial installations and the quality of performance required in studio and home applications. The unit is a standard rack-mount configuration that stands 1-7/8" high and is cooled by convective air. All the input and output connections are on the back panel. The front panel contains LED indicators for power and DDT™ activation, detented/calibrated sensitivity controls, and a mains power switch.

INDUSTRIAL AND COMMERCIAL INSTALLATIONS:

For commercial and other installations, where sustained high power operation is required, the CS 200X should be mounted in a standard 19" rack with at least one rack space between each amp in the stack. If multiple CS 200Xs are stacked on top of one another, the upper units will be heated by the lower units. An adequate "COOL" air supply (air that is not preheated by other equipment) must be provided for each amplifier when rack-mounted. If cooling is inadequate due to preheated air, or a reduction of air flow occurs due to blockage of the amplifier inlet/outlet ports, or if the amp is severely overloaded or shorted, the unit's thermal sensing system may cause temporary shutdown of that particular channel. This is indicated by a loss of signal in that channel. Depending upon available cooling air, operation should be restored in that channel relatively quickly. In any event corrective action should be taken to determine the cause of the thermal shutdown. If the unit is not severely overloaded or shorted, then steps should be taken to provide a cooler environment for all the amplifiers. As a general rule, the cooler electronic equipment is operated, the longer its useful service life.

STUDIO AND HOME INSTALLATION:

In most low to medium power applications, the CS 200X can be mounted in any configuration. It is desirable for, if at all possible, the unit be located at the top of an equipment stack. This will prevent possible overheating of any sensitive equipment by the hot air rising from the power amplifier. As a general rule, most home and studio requirements should never cause a thermal shutdown of either channel; however, if it does, this may indicate that you have not taken the necessary steps to provide adequate cooling. Remember, closed up in a cabinet, the CS 200X will have severe cooling problems, even at low power levels. Again, inadvertent short circuit or sustained overloaded usage could also cause temporary thermal shutdown.

BRIDGE MODE:

The bridge mode on stereo amplifiers is often misunderstood as to the actual operation and usage. In basic terms, when a two channel amplifier is operated in the BRIDGE mode, it is converted into a single channel unit with a POWER RATING equal to the sum of both channels' power ratings at a LOAD RATING of twice that of the single channel rating. In this case, the CS 200X is rated at 110 watts RMS per channel into 2 ohms with the Impedance Selector switch set a 4 ohms. Thus, the BRIDGE RATING is 220 watts RMS into 4 ohms (minimum load). Bridge mode operation is accomplished by placing the mode switch in the "BRIDGE" position to connect the load between the RED binding posts of each channel and using channel A as the input channel. All channel B input functions are defeated, and they serve no purpose in bridge mode.

70 VOLT DISTRIBUTION SYSTEMS:

A popular application for BRIDGE mode operation is to drive sound distribution systems in very large public address applications. In this mode, the CS 200X can actually drive 70 volt systems directly without using very expensive output transformers. The primary advantage of such an approach is cost. 70 volt distribution systems are very common where large numbers of relatively small loudspeakers are used for BACKGROUND MUSIC AND PAGING. Such systems require the use of 70 volt TRANSFORMERS at each loudspeaker. The CS 200X is unique here because when the 16 ohm impedance setting is selected, the unit delivers exactly 70 volts in

bridge mode into a 70 volt system load of 32 ohms at 170 W RMS output power. This makes the CS 200X ideal for small and medium-sized distribution systems.

25 VOLT SYSTEMS:

Although not related to the bridge mode, the CS 200X can also drive 25 volt distribution systems directly. 25 volt systems are not as popular as 70 volt systems, but they are still in use as a lower cost alternative. The CS 200X will deliver 25 volts per channel at 85 W RMS output when the 8 ohm impedance is selected.

DDT™:

Peavey's patented DDT™ compression system enables the sound man to maximize the performance of the amplifier/speaker combination by preventing the power amp from running out of headroom (clipping). This compression system is activated by a very unique circuit that senses signal conditions that might overload the amplifier and activates compression (reduces the amp gain) when clipping is imminent. Threshold of compression, then, is clipping itself, and no specific threshold control is used. This technique effectively utilizes every precious watt available for the power amplifier to reproduce the signal while at the same time minimizes clipping and distortion. Thus, it significantly reduces the potential of loudspeaker degradation and damage. The DDT system is an automatic, hands-off approach to the problem of power amplifier clipping. Since the CS 200X power amplifier uses a circuit breaker for over-current protection, the DDT compression system plays even a more important roll in continuous performance by preventing each channel from clipping and overload. Continuous operation at clipping can cause the circuit breaker to trip, but with the DDT Compression System functioning, this problem is minimized.

The DDT compression system on the CS 200X cannot be defeated externally, as is possible with many other Peavey power amps where a defeat switch is provided. Because of the power levels involved, the DDT compression system is almost a must to prevent clipping and overload. However, if it is desirable to defeat the DDT compression system for any reason, we suggest the unit be taken to a qualified Peavey Service Center where they can defeat the system internally. Under no circumstances should any nonqualified person attempt this modification.

IMPEDANCE SELECTOR SETTING	4 OHMS	8 OHMS	16 OHMS
LOAD VALUE PER CHANNEL:			
2 OHMS	OK	NO	NO
4 OHMS	OK	OK	NO
8 OHMS	LP	OK	OK
16 OHMS	LP	LP	OK
LOAD VALUE BRIDGE MODE:			
2 OHMS	NO	NO	NO
4 OHMS	OK	NO	NO
8 OHMS	OK	OK	NO
16 OHMS	LP	OK	OK
32 OHMS	LP	LP	OK

CODES: NO=Not Recommended OK=Allowable LP=Low Power

Specifications

CHARACTERISTICS (@ 120 V AC, 60 Hz)

[Impedance Selector Setting]

Output Power: (Typical Value)

Stereo mode, both channels driven

- 2 ohms, 1 kHz, 1% THD - 110 W RMS per channel [4 ohms]
- 4 ohms, 1 kHz, 1% THD - 85 W RMS per chan [4 ohms], 120 W RMS per chan [8 ohms]
- 8 ohms, 1 kHz, 1% THD - 85 W RMS per chan [8 ohms], 120 W RMS per chan [16 ohms]
- 16 ohms, 1 kHz, 1% THD - 85 W RMS per chan [16 ohms]

Bridge mode, mono

- 4 ohms, 1 kHz, 1% THD - 220 W RMS [4 ohms]
- 8 ohms, 1 kHz, 1% THD - 170 W RMS [4 ohms], 240 W RMS [8 ohms]
- 16 ohms, 1 kHz, 1% THD - 170 W RMS [8 ohms], 240 W RMS [16 ohms]
- 32 ohms, 1 kHz, 1% THD - 170 W RMS [16 ohms]

Rated Output Power:

Stereo mode, both channels driven

- 4 ohms, 20 Hz to 20 kHz, 0.1% THD - 75 W RMS per chan [4 ohms]
- 8 ohms, 20 Hz to 20 kHz, 0.07% THD - 75 W RMS per chan [8 ohms]
- 16 ohms, 20 Hz to 20 kHz, 0.05% THD - 75 W RMS per chan [16 ohms]

Bridge mode, mono

- 8 ohms, 20 Hz to 20 kHz, 0.1% THD - 150 W RMS [4 ohms]
- 16 ohms, 20 Hz to 20 kHz, 0.07% THD - 150 W RMS [8 ohms]
- 32 ohms, 20 Hz to 20 kHz, 0.05% THD - 150 W RMS [16 ohms]

Distortion: (Typical Value)

Stereo mode, both channels driven

- 20 Hz to 20 kHz, @ rated power & load - Below 0.1% [4 ohms], 0.07% [8 ohms], 0.05% [16 ohms]

Input Sensitivity & Impedance:

Input attenuator set FCW

- @ rated power & load - 0.7 V RMS (-3 dBV) [4 ohms], 1.0 V RMS (0 dBV) [8 ohms],
- 1.4 V RMS (+3 dBV) [16 ohms], 20 K ohms (28 dB gain)

Slew Rate: (Typical Value)

- Stereo mode, each channel - 15 volts per uSec
- Bridge mode, mono - 30 volts per uSec

Frequency Response: (Typical Value)

Stereo mode, both channels driven

- ±1 dB, 1 W RMS @ rated load - 10 Hz to 40 kHz
- ±0.2 dB, @ rated power & load - 20 Hz to 20 kHz

Damping Factor: (Typical Value)

Stereo mode, both channels driven

- @ rated load, 1 kHz - Greater than 100 [4 ohms], 200 [8 ohms], 400 [16 ohms]

Hum & Noise:

Stereo mode, both channels driven

- Below rated power, unweighted - 97 dB [4 ohms], 100 dB [8 ohms], 103 dB [16 ohms]

Power Consumption:

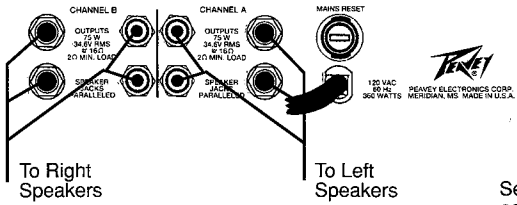
Stereo mode, both channels driven

- @ rated power & load - 2.5 A @ 120 V AC

Dimensions & Weight:

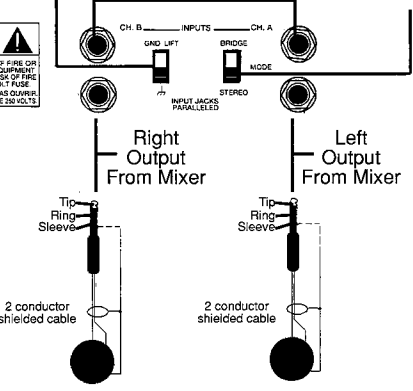
- H - 1.75" (4.4 cm), W - 19" (48.3 cm), D - 8" (20.3 cm), N - 22 lbs. (10.0 kg)

STEREO MODE - BALANCED INPUTS

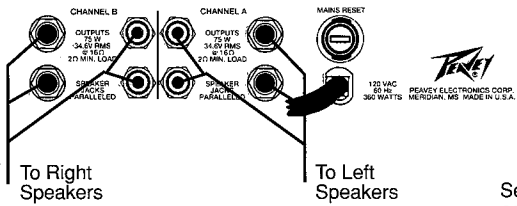


Set impedance selector switch to match load impedances

Can be used as outputs to patch to other power amp inputs provided stereo patch cords are used
 Ground Lift Defeated
 Mode Switch In Stereo Position

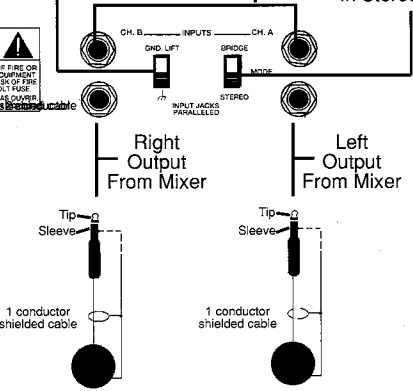


STEREO MODE - UNBALANCED INPUTS

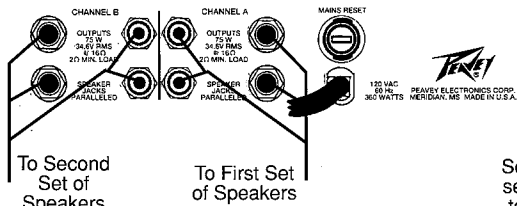


Set impedance selector switch to match load impedances

If hum is present in system, the ground lift feature might eliminate it
 Can be used as outputs to patch to other power amp inputs with single conductor shielded patch cords
 Mode Switch In Stereo Position

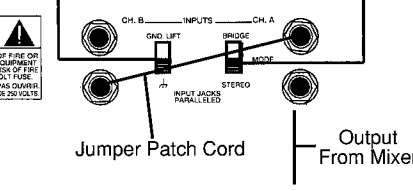


TWO CHANNEL MONO MODE

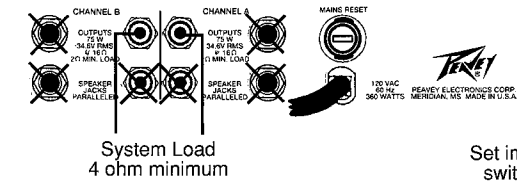


Set impedance selector switch to match load impedances

If hum is present in system, the ground lift feature might eliminate it
 Mode Switch In Stereo Position

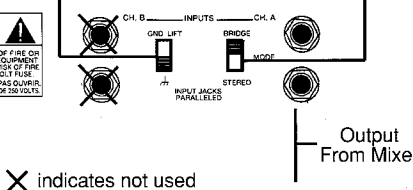


BRIDGE MODE



Set impedance selector switch to match load impedances

If hum is present in system, the ground lift feature might eliminate it
 Mode Switch In Bridge Position



X indicates not used

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PEAVEY ONE-YEAR LIMITED WARRANTY/REMEDY

PEAVEY ELECTRONICS CORPORATION ("PEAVEY") warrants this product, EXCEPT for covers, footswitches, patchcords, tubes and meters, to be free from defects in material and workmanship for a period of one (1) year from date of purchase, PROVIDED, however, that this limited warranty is extended only to the original retail purchaser and is subject to the conditions, exclusions, and limitations hereinafter set forth:

PEAVEY 90-DAY LIMITED WARRANTY ON TUBES AND METERS

If this product contains tubes or meters, Peavey warrants the tubes or meters contained in the product to be free from defects in material and workmanship for a period of ninety (90) days from date of purchase; PROVIDED, however, that this limited warranty is extended only to the original retail purchaser and is also subject to the conditions, exclusions, and limitations hereinafter set forth.

CONDITIONS, EXCLUSIONS, AND LIMITATIONS OF LIMITED WARRANTIES

These limited warranties shall be void and of no effect, if:

- a. The first purchase of the product is for the purpose of resale; or
- b. The original retail purchase is not made from an AUTHORIZED PEAVEY DEALER; or
- c. The product has been damaged by accident or unreasonable use, neglect, improper service or maintenance, or other causes not arising out of defects in material or workmanship; or
- d. The serial number affixed to the product is altered, defaced, or removed.

In the event of a defect in material and/or workmanship covered by this limited warranty, Peavey will:

- a. In the case of tubes or meters, replace the defective component without charge.
- b. In other covered cases (i.e., cases involving anything other than covers, footswitches, patchcords, tubes or meters), repair the defect in material or workmanship or replace the product, at Peavey's option; and provided, however, that, in any case, all costs of shipping, if necessary, are paid by you, the purchaser.

THE WARRANTY REGISTRATION CARD SHOULD BE ACCURATELY COMPLETED AND MAILED TO AND RECEIVED BY PEAVEY WITHIN FOURTEEN (14) DAYS FROM THE DATE OF YOUR PURCHASE.

In order to obtain service under these warranties, you must:

- a. Bring the defective item to any PEAVEY AUTHORIZED DEALER or AUTHORIZED PEAVEY SERVICE CENTER and present therewith the ORIGINAL PROOF OF PURCHASE supplied to you by the AUTHORIZED PEAVEY DEALER in connection with your purchase from him of this product. If the DEALER or SERVICE CENTER is unable to provide the necessary warranty service you will be directed to the nearest other PEAVEY AUTHORIZED DEALER or AUTHORIZED PEAVEY SERVICE CENTER which can provide such service.

OR

- b. Ship the defective item, prepaid, to:

PEAVEY ELECTRONICS CORPORATION
International Service Center
326 Hwy. 11 & 80 East
Meridian, MS 39301

including therewith a complete, detailed description of the problem, together with a legible copy of the original PROOF OF PURCHASE and a complete return address. Upon Peavey's receipt of these items: If the defect is remedial under these limited warranties and the other terms and conditions expressed herein have been complied with, Peavey will provide the necessary warranty service to repair or replace the product and will return it, FREIGHT COLLECT, to you, the purchaser.

Peavey's liability to the purchaser for damages from any cause whatsoever and regardless of the form of action, including negligence, is limited to the actual damages up to the greater of \$500.00 or an amount equal to the purchase price of the product that caused the damage or that is the subject of or is directly related to the cause of action. Such purchase price will be that in effect for the specific product when the cause of action arose. This limitation of liability will not apply to claims for personal injury or damage to real property or tangible personal property allegedly caused by Peavey's negligence. Peavey does not assume liability for personal injury or property damage arising out of or caused by a non-Peavey alteration or attachment, nor does Peavey assume any responsibility for damage to interconnected non-Peavey equipment that may result from the normal functioning and maintenance of the Peavey equipment.

UNDER NO CIRCUMSTANCES WILL PEAVEY BE LIABLE FOR ANY LOST PROFITS, LOST SAVINGS, ANY INCIDENTAL DAMAGES, OR ANY CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE PRODUCT, EVEN IF PEAVEY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

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SOME STATES DO NOT ALLOW LIMITATION ON HOW LONG AN IMPLIED WARRANTY LASTS, OR THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATIONS OR EXCLUSIONS MAY NOT APPLY TO YOU. THESE LIMITED WARRANTIES GIVE YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER RIGHTS WHICH MAY VARY FROM STATE TO STATE.

THESE LIMITED WARRANTIES ARE THE ONLY EXPRESSED WARRANTIES ON THIS PRODUCT, AND NO OTHER STATEMENT, REPRESENTATION, WARRANTY, OR AGREEMENT BY ANY PERSON SHALL BE VALID OR BINDING UPON PEAVEY.

In the event of any modification or disclaimer of expressed or implied warranties, or any limitation of remedies, contained herein conflicts with applicable law, then such modification, disclaimer or limitation, as the case may be, shall be deemed to be modified to the extent necessary to comply with such law.

Your remedies for breach of these warranties are limited to those remedies provided herein and Peavey Electronics Corporation gives this limited warranty only with respect to equipment purchased in the United States of America.

INSTRUCTIONS — WARRANTY REGISTRATION CARD

1. Mail the completed WARRANTY REGISTRATION CARD to:

PEAVEY ELECTRONICS CORPORATION
P.O. BOX 2898
Meridian, MS 39302-2898

- a. Keep the PROOF OF PURCHASE. In the event warranty service is required during the warranty period, you will need this document. There will be no identification card issued by Peavey Electronics Corporation.
2. IMPORTANCE OF WARRANTY REGISTRATION CARDS AND NOTIFICATION OF CHANGES OF ADDRESSES:
 - a. Completion and mailing of WARRANTY REGISTRATION CARDS — Should notification become necessary for any condition that may require correction, the REGISTRATION CARD will help ensure that you are contacted and properly notified.
 - b. Notice of address changes — If you move from the address shown on the WARRANTY REGISTRATION CARD, you should notify Peavey of the change of address so as to facilitate your receipt of any bulletins or other forms of notification which may become necessary in connection with any condition that may require dissemination of information or correction.
3. You may contact Peavey directly by telephoning (601) 483-5365.

IMPORTANT SAFETY INSTRUCTIONS

WARNING: When using electric products, basic cautions should always be followed, including the following:

1. Read all safety and operating instructions before using this product.
2. All safety and operating instructions should be retained for future reference.
3. Obey all cautions in the operating instructions and on the back of the unit.
4. All operating instructions should be followed.
5. This product should not be used near water, i.e., a bathtub, sink, swimming pool, wet basement, etc.
6. This product should be located so that its position does not interfere with its proper ventilation. It should not be placed flat against a wall or placed in a built-in enclosure that will impede the flow of cooling air.
7. This product should not be placed near a source of heat such as a stove, radiator, or another heat producing amplifier.
8. Connect only to a power supply of the type marked on the unit adjacent to the power supply cord.
9. Never break off the ground pin on the power supply cord. For more information on grounding, write for our free booklet "Shock Hazard and Grounding."
10. Power supply cords should always be handled carefully. Never walk or place equipment on power supply cords. Periodically check cords for cuts or signs of stress, especially at the plug and the point where the cord exits the unit.
11. The power supply cord should be unplugged when the unit is to be unused for long periods of time.
12. If this product is to be mounted in an equipment rack, rear support should be provided.
13. Metal parts can be cleaned with a damp rag. The vinyl covering used on some units can be cleaned with a damp rag or an ammonia-based household cleaner if necessary. Disconnect unit from power supply before cleaning.
14. Care should be taken so that objects do not fall and liquids are not spilled into the unit through the ventilation holes or any other openings.
15. This unit should be checked by a qualified service technician if:
 - a. The power supply cord or plug has been damaged.
 - b. Anything has fallen or been spilled into the unit.
 - c. The unit does not operate correctly.
 - d. The unit has been dropped or the enclosure damaged.
16. The user should not attempt to service this equipment. All service work should be done by a qualified service technician.
17. This product should be used only with a cart or stand that is recommended by Peavey Electronics.
18. Exposure to extremely high noise levels may cause a permanent hearing loss. Individuals vary considerably in susceptibility to noise induced hearing loss, but nearly everyone will lose some hearing if exposed to sufficiently intense noise for a sufficient time. The U.S. Government's Occupational Safety and Health Administration (OSHA) has specified the following permissible noise level exposures.

Duration Per Day In Hours	Sound Level dBA, Slow Response
8	90
6	92
4	95
3	97
2	100
1 1/2	102
1	105
1/2	110
1/4 or less	115

According to OSHA, any exposure in excess of the above permissible limits could result in some hearing loss.

Ear plugs or protectors in the ear canals or over the ears must be worn when operating this amplification system in order to prevent a permanent hearing loss if exposure is in excess of the limits as set forth above. To ensure against potentially dangerous exposure to high sound pressure levels, it is recommended that all persons exposed to equipment capable of producing high sound pressure levels such as this amplification system be protected by hearing protectors while this unit is in operation.

SAVE THESE INSTRUCTIONS!